



The U.S. Department of Agriculture's (USDA) **Agricultural Research Service (ARS)** has positioned itself to benefit U.S. agriculture with a collaborative network of

OVERSEAS BIOLOGICAL CONTROL LABORATORIES (OBCLs),

SAVING THE AG INDUSTRY MILLIONS.

OBCLs FOCUS PRIMARILY ON INVASIVE SPECIES

Invasive species are estimated to cost the U.S. agriculture industry more than \$100 billion per year

\$100,000,000,000

BIOLOGICAL CONTROL AGENTS are **INTRODUCED** natural enemies that are used to fight invasive species that severely damage crops.



Invasive species are pests or weeds not native to a certain area, where there are limited or no predators to control them, leaving them to reproduce & spread, damaging the environment.

OBCL collaborators can often find **BIOCONTROL AGENTS** in countries not easily accessible to the U.S.



FIVE OVERSEAS LABORATORIES WORK DIRECTLY WITH ARS AT LOCATIONS THROUGHOUT THE U.S.



Montpellier
FRANCE

\$3,109,068



Thessaloniki
GREECE



Hurlingham
ARGENTINA

\$581,213



Brisbane
AUSTRALIA

\$417,712



Beijing
CHINA

\$92,066



**ARS EXPENDITURE
FOR FY2021**

For every **\$1 SPENT** on biological control there is a net **BENEFIT OF \$23**



MELALEUCA

Threatened Everglades National Park and invaded **CALIFORNIA** and **PUERTO RICO**

Three biocontrol species discovered by scientists at the **AUSTRALIAN BIOLOGICAL CONTROL LABORATORY**

Biocontrol damaged trees produce **1% OF THE SEEDS** formed by undamaged trees



GIANT REED

SHOOT-GALLING WASPS from **FRANCE** were introduced along the **RIO GRANDE RIVER** to control the Giant Reed
Water savings valued at **\$4.4 MILLION/YEAR**

54% DECLINE in live biomass along **RIO GRANDE RIVER**, with partial recovery of native plants

WASP is now established in **CENTRAL VALLEY, CA**



WATERHYACINTH

Seriously chokes waterways throughout **SOUTHERN US**

Spread through **FLORIDA, LOUISIANA, CALIFORNIA, PUERTO RICO**

Four biocontrol species discovered by scientists from the **ARGENTINE LAB**

Return of investment estimated **\$34 BENEFIT FOR \$1 INVESTMENT OF BIOCONTROL**



ALLIGATORWEED

Seriously chokes waterways throughout **SOUTHEAST US**

Three biocontrol species established 1964-1971 discovered by scientists in **ARGENTINA**

By **1982** alligatorweed was only a minor problem

NO LONGER an important weed throughout much of historic range